R E P O R T R E S U M E S

ED 013 498 EA 000 833

ATTITUDES TOWARD EDUCATION AND GENERAL SOCIAL ATTITUDES--A "Q" STUDY.

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PUB DATE 17 FEB 67

EDRS PRICE MF-$0.25 HC-$0.44 11P.

DESCRIPTORS- *EDUCATIONAL ATTITUDES, *SOCIAL ATTITUDES, *Q SORT, ANALYSIS OF VARIANCE, FACTOR ANALYSIS, *HYPOTHESIS TESTING, *STATISTICAL ANALYSIS, TABLES (DATA), NEW YORK CITY,

THREE STRUCTURED Q SORTS CONTAINING LIBERAL, CONSERVATIVE, PROGRESSIVE, AND TRADITIONALIST STATEMENTS ENABLED THE INVESTIGATOR TO TEST THE HYPOTHESIS THAT INDIVIDUALS WHO ARE LIBERAL IN THEIR SOCIAL ATTITUDES WILL TEND TO BE PROGRESSIVE IN THEIR EDUCATIONAL ATTITUDES, WHEREAS INDIVIDUALS WHO ARE CONSERVATIVE IN THEIR SOCIAL ATTITUDES WILL TEND TO BE TRADITIONALIST IN THEIR EDUCATIONAL ATTITUDES. TO ANALYZE INTRA-INDIVIDUAL AND INTER-INDIVIDUAL DIFFERENCES, 36 SUBJECTS WERE SELECTED, NINE REPRESENTING EACH OF THE FOUR ATTITUDES. THE HYPOTHESIS OF LIBERAL-PROGRESSIVE AND CONSERVATIVE-TRADITIONAL PATTERNS WAS GENERALLY SUPPORTED BY ANALYSIS OF VARIANCE, FACTOR ANALYSIS, AND DETERMINATION OF COEFFICIENTS OF CONGRUENCE. THIS PAPER WAS PRESENTED AT THE ANNUAL MEETING OF THE AMERICAN EDUCATIONAL RESEARCH ASSOCIATION (NEW YORK, FEBRUARY 17, 1967). (JK)

ATTITUDES TOWARD EDUCATION AND GENERAL SOCIAL ATTITUDES: A "Q" STUDY*

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What is the relation between general social attitudes and attitudes toward education? If there is a hierarchical system of attitudes as has been proposed by Eysenck (1954), among others, then it would be expected that the attitude structure of individuals holding the same general attitude would be similar. Eysenck distinguishes among four different levels of organization or structure, namely non-reproducible opinions, reproducible opinions, attitudes, or super-attitudes or ideologies. Attitudes, in this model, are comprised of a set of interrelated opinions about a cognitive object. These attitudes, in turn, "are themselves correlated and give rise to what we might call super-attitudes or ideologies." (Eysenck, p. 113) It is with the levels of attitudes and ideologies that this paper is concerned. What Eysenck calls ideologies may also be referred to as a generalized or a general attitude. Education is a cognitive object, it is also ~~In this study, education is~~ considered to be part of the general social milieu. It was therefore hypothesized that individuals who are liberal in their social attitudes will also tend to be progressive in their educational attitudes and individuals who are conservative in their social attitudes will also tend to be traditional in their educational attitudes.

In a study done as preliminary to the present one, the author found that progressivism and traditionalism are basic dimensions of educational attitudes.

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*Paper presented at the AERA Annual Meeting, New York City, February 17, 1967

These dimensions were found to be factorially invariant under different conditions of item and subject sampling. Kerlinger et al report similar findings.

General social attitudes have, during the past forty years, assumed a major role in attitude measurement. The existence of liberalism and conservatism as basic dimensions of social attitudes has been fairly well established although, from the factor analytic studies available, these have generally emerged as one bipolar factor whereas the factor analytic studies of educational attitudes have generally yielded two major orthogonal factors rather than one bipolar factor. This difference in the factor structure is beyond the scope of this presentation.

Method

The basic methodology in this study was the Q technique. Structured Q sorts enabled the investigator to test the hypothesized attitude structure, and to analyze intra-individual and inter-individual differences.

Three Q sorts were used:

1) An 80 item educational attitude sort that contained 40 progressive and 40 traditional statements, developed and used by Kerlinger. This sort is referred to as KQED.

2) A 60 item educational attitude Q sort constructed by the writer, which contained 30 progressive and 30 traditional statements, referred to as SQED. None of the statements were duplications of KQED items.

3) The third instrument was a 60 item social attitudes Q sort consisting of 30 liberal and 30 conservative statements, which ~~in the analyses~~ were further subdivided into 15 economic and 15 general social items each.

Each subject, then, sorted the three decks. The order remained constant throughout the testing with the social attitudes deck being sorted between KQED and SQED.

In Q methodology the subjects are often not chosen at random but rather according to "known" characteristics. Related to the two part design of this study (although only the second part is being reported) "known" characteristics were either educational attitudes or social attitudes. It was further necessary to identify the liberals and the conservatives within the group of subjects whose social attitudes were known. Similarly, the progressives and traditionalists among the group of subjects with known educational attitudes were identified. The sample of 36 subjects was thus subdivided into 9 liberals, 9 conservatives, 9 progressives, and 9 traditionalists.

Each subject's Q sorts were subjected to analyses of variance. The educational attitudes sorts, which were structured as one-way, were analyzed by simple analyses of variance. The social attitudes sort, which was structured as a two-way sort, that is, by attitude and area, was analyzed by a 2 X 2 analysis of variance. The significance between attitudes F ratios obtained in all the analyses of variance were qualitatively compared by inspection.

In addition to the analyses of variance, results for all subjects for each of the three Q sorts were correlated. This resulted in three 36 X 36 intercorrelation matrices. The three matrices were then each subjected to principal components factor analysis. The resulting factors were rotated orthogonally using the normal varimax criterion.

To determine the degree of factorial similarity between the major factors obtained for KQED and SQED and the major factors obtained from the social attitudes Q sort coefficients of congruence (also called index of factorial similarity) were computed.

Results

Analysis of variance. All subjects chosen for "known" social attitudes had significant F ratios at $P \leq .001$ for the social attitudes Q sort, as would be expected, in the direction corresponding to the attitude for which they were chosen. Each of the liberal subjects also had a significant mean difference between the progressive and traditional statements in the direction of the progressive statements on the educational attitudes Q sorts. Of the nine conservative subjects five had significant mean differences in the direction of the traditional statements. The other four did not show any significant mean differences between the progressive and traditional statements. Of the 18 subjects chosen for "known" educational attitudes the results of only two subjects, one traditional and one progressive, did not fit the hypothesized pattern of significant liberal-progressive means or conservative-traditional means. In summary, then, the significant F ratios between attitude means of the social attitudes Q sort and the educational attitudes Q sorts generally supported the hypothesis of liberal-progressive and conservative-traditional patterns.

Factor analysis. Using the criterion of analyzing 95 per cent of the communality in a principal factor solution as discussed by Harman (p. 160) four KQED, five SQED, and four social attitude factors were retained for rotation. The first two rotated factors for each sort that are referred to

as the major factors accounted for, ~~the following percentages~~ a major proportion of the common factor variance:

	Factor A	Factor B	Cum. %
KQED	32.92	36.01	68.93
SQED	37.89	31.17	69.06
Social Attitude*	34.39	28.77	63.16

It is with reference to these factors that the results will be discussed although the factor loadings for all the rotated factors are appended in Tables 1, 2, and 3. A factor loading $\geq .30$ was considered significant for this study.

When significant factor loadings on the liberalism and progressivism factors, on the one hand, and the conservatism and traditionalism factors on the other hand, were compared, the following patterns emerged. Of the total sample of 36 subjects, 18 had significant loadings on the liberalism factor. These 18 comprise the two subgroups of liberals and progressives. These subjects also loaded on the progressivism factor, thereby supporting the hypothesis of a liberalism-progressivism pattern. The conservative-traditionalism pattern also emerged, although not as clearly. Fourteen out of the 18 subjects in these subgroups had significant loadings on the conservatism factor and the liberalism factor.

Coefficients of congruence. The coefficients of congruence between the liberalism factor of the social attitudes sort and the progressivism factor

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*The social attitude factor analytic literature has established the existence of a liberal-conservative factor. These dimensions were taken to be opposite ends of a bipolar factor; in other words, liberalism and conservatism defined two opposite poles of a single factor. The results of the factor analysis of the social attitudes Q sort used in this study did not seem to be consistent with these findings. Rather, two separate factors emerged that defined the dimensions of liberalism and conservatism respectively.

of each of the education sorts and similarly between the conservatism factor and the traditionalism factors yielded an objective criterion for determining the relation between these factors:

	Liberalism - Progressivism Factor A	Conservatism - Traditionalism Factor B
Social Attitude - KQED	.92	.89
Social Attitude - SQED	.92	.86

It appears that there is factorial similarity between the liberalism factor and the progressivism factor and between the conservatism factor and the traditionalism factor.* The subjects in this study who were liberal in their social attitudes also tended to be progressive in their educational attitudes and the subjects, although to a lesser extent, who were conservative in their social attitudes also tended to be traditional in their educational attitudes.

The results of this study, then, within the limited generalizations permitted by its design, seem to be in keeping with other studies that have attempted to demonstrate a generalized attitude structure of individuals and to define more inclusive patterns of attitude organization; for example, Adorno et al's authoritarian personality study (1950), Rokeach's open and closed belief systems work (1960), and, to a lesser extent, McClosky's characteristic conservative focus (1958).

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*For comparative purposes you may wish to know the results of the coefficients of congruence computed between the progressivism factors of KQED and SQED and also between the two traditionalism factors. For the two progressivism factors the coefficient was .96 and for the two traditionalism factors it was .97.

TABLE I

KQED ROTATED FACTOR MATRIX (V)[ab]

	Subjects	A	B	C	D	h^2
Liberal	1	705	-354	215	269	669
	2	844	-209	218	-125	819
	3	716	-444	186	-027	745
	4	574	-038	110	020	343
	5	844	-079	-077	039	726
	6	812	-116	086	097	690
	7	562	174	299	203	477
	8	393	-156	202	636	624
	9	814	-098	-040	187	709
Conservative	10	005	719	-086	-110	536
	11	-042	657	079	101	450
	12	258	294	763	064	739
	13	012	164	725	484	787
	14	205	648	224	-067	517
	15	188	301	127	056	145
	16	174	732	160	037	593
	17	-099	731	109	-294	642
	18	-274	664	132	071	538
Progressive	19	854	021	107	006	741
	20	635	-367	207	-132	598
	21	613	-148	250	545	757
	22	454	-162	678	105	703
	23	458	-050	585	-049	557
	24	554	-324	282	535	778
	25	557	-231	254	356	555
	26	543	-479	190	121	575
	27	774	-125	136	295	720
Traditional	28	-337	753	-013	-072	686
	29	-362	783	-110	-003	756
	30	-075	802	008	-166	676
	31	-353	736	-213	-173	742
	32	-117	841	054	-068	734
	33	-074	789	-056	-027	632
	34	-163	770	-157	-023	645
	35	-207	769	074	219	688
	36	-224	766	157	001	662

[a] All decimal points are omitted.

[b] Significant factor loadings are underlined.

TABLE II

SQED ROTATED FACTOR MATRIX (V)[ab]

	Subjects	A	B	C	D	E	h^2
	1	713	-412	063	168	101	721
	2	660	-324	161	047	117	582
	3	629	-381	-108	-114	251	628
	4	508	016	-142	045	002	281
Liberal	5	790	-098	-084	-067	148	667
	6	631	108	-012	278	008	487
	7	770	092	-153	115	-015	638
	8	661	-168	-051	390	182	653
	9	852	-166	-176	054	-047	790
	10	-205	644	458	-071	183	705
	11	-277	438	327	-135	-221	443
	12	266	196	114	766	172	739
	13	353	429	073	539	207	647
Conservative	14	228	568	-021	089	-006	383
	15	139	301	787	003	008	730
	16	060	528	297	-476	-030	598
	17	-196	494	608	090	-086	668
	18	-284	647	438	067	-011	696
	19	789	049	021	026	199	666
	20	844	-155	045	-006	062	742
	21	706	-310	-081	216	040	649
	22	497	-066	007	329	603	723
Progressive	23	500	031	006	212	718	811
	24	620	-367	-267	046	351	716
	25	776	-216	099	151	162	708
	26	683	-353	-029	115	094	614
	27	750	-288	021	071	207	694
	28	-434	670	282	080	-053	726
	29	-576	578	000	237	-184	756
	30	-214	781	039	070	057	665
	31	-230	787	038	112	-363	818
Traditional	32	003	843	071	-225	107	778
	33	-275	788	-021	116	-157	735
	34	-067	834	261	154	-169	820
	35	-312	677	322	-075	191	701
	36	-259	774	180	102	010	709

[a] All decimal points are omitted.

[b] Significant factor loadings are underlined.

TABLE III

SOCIAL ATTITUDES ROTATED FACTOR MATRIX (V)[ab]

	Subjects	A	B	C	D	h^2
	1	683	-274	-280	080	626
	2	529	-543	-170	296	691
	3	656	-201	-310	431	753
	4	722	-103	-349	144	674
Liberal	5	752	-360	-023	137	714
	6	739	022	-112	273	695
	7	648	-398	-199	066	622
	8	720	-200	087	-124	581
	9	862	-095	-155	210	820
	10	-161	519	557	115	619
	11	-158	801	083	138	692
	12	057	270	831	079	773
	13	-191	190	830	-004	761
Conservative	14	098	837	149	-081	739
	15	-134	609	442	-097	594
	16	088	749	218	-208	660
	17	-327	628	447	122	716
	18	-417	470	486	-068	636
	19	742	-049	187	382	734
	20	745	136	169	-073	607
	21	731	188	-046	138	591
	22	409	-040	104	710	683
Progressive	23	391	098	105	766	760
	24	638	-190	-263	383	659
	25	812	-080	088	-077	679
	26	477	-360	-185	232	445
	27	673	-142	-196	198	551
	28	-479	608	238	-117	669
	29	-086	541	164	-172	357
	30	209	137	-020	183	096
	31	-236	745	212	051	658
Traditional	32	149	425	229	-010	255
	33	-046	781	-080	169	647
	34	-113	793	055	057	648
	35	-235	740	300	-222	742
	36	-037	271	343	077	198

[a] All decimal points are omitted.

[b] Significant factor loadings are underlined.